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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/662,371      | 09/16/2003  | Katsunori Yamazaki   | 116573              | 9410             |

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EXAMINER

XIAO, KE

|          |              |
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| ART UNIT | PAPER NUMBER |
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2629

DATE MAILED: 04/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/662,371

Applicant(s)

YAMAZAKI, KATSUNORI

Examiner

Ke Xiao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-7** are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Park (US 2003/0179165).

Regarding independent **Claim 1**, Park teaches an electro-optical device including a plurality of scanning lines and a plurality of data lines, which are wired to cross the scanning lines (Park, Fig. 10 elements DL and SL), comprising:

electrodes which are wired to cross the data lines and are capacitively coupled with the data lines (Park, Fig. 10 element SL);

comparison circuits that compare signal levels generated in the electrodes to a predetermined level to output and amount of change in the signal levels (Park, Fig. 10 element 100 and Vref); and

logic circuits that add the amount of change in the signal levels output from the comparison circuits to the signal levels supplied to each scanning line (Park, Fig. 10 element 100).

Regarding independent **Claim 2**, Park teaches an electro-optical device (Park, Fig. 10) including:

- a plurality of scanning lines (Park, Fig. 10 element SL);
  - a scanning line driving circuit that supplies to each of the scanning lines a scanning signal which is set to be at a selection level and a non-selection level corresponding to a selection period and a non-selection period of each scanning line (Park, Figs. 9 and 10 element SL);
  - a plurality of data lines which are wired to cross the scanning lines (Park, Fig. 10 element DL);
  - a data line driving circuit that supplies to each of the data lines a data signal whose pulse width is modulated on the basis of display data (Park, Fig. 10 element DL, Pg. 3 paragraph [0053]); and
  - pixels provided in portions where the scanning lines cross the data lines and driven on the basis of the scanning signals and the data signals (Park, Fig. 10 element DL, SL and 50),
- the electro-optical device comprising:
- electrodes which are wired to cross the data lines and are capacitively coupled with the data lines (Park, Fig. 10 element SL);
  - comparison circuits that compare signal levels generated in the electrodes to a predetermined level to output an amount of change in the signal levels (Park, Fig. 10 element 100 and Vref); an

logic circuits that add the amount of change in the signal levels output from the comparison circuit to the selection level (Park, Fig. 10 element 100).

Regarding **Claim 3**, Park further teaches the comparison circuit being inversion logic circuit, in which a predetermined bias level is applied to input terminals (Park, Fig. 10 element 100 and  $V_{ref}$ ).

Regarding **Claim 4**, Park further teaches the logic circuits not add the amount of change in the signal levels output from the comparison circuits at an early state of the selection period to the selection level (Park, Fig. 10 element 100 feedback op-amps always have a delay therefore it can be considered not an early state).

Regarding independent **Claim 5**, Park teaches a method of driving an electro-optical device including a plurality of scanning lines, a scanning line driving circuit that supplies to each of the scanning lines a scanning signal which is set to be at a selection level and a non-selection level corresponding to a selection period and a non-selection period of each scanning line (Park, Figs. 9 and 10 element SL), a plurality of data lines which are wired to cross the scanning lines, a data line driving circuit that supplies to each of the data lines a data signal whose pulse width is modulated on the basis of display data, and pixels provided in portions where the scanning lines cross the data lines and driven on the basis of the scanning signals and the data signals (Park, Fig. 10 element DL, Pg. 3 paragraph [0053]), the method comprising:

wiring electrodes to cross the data lines and capacitively coupling the electrodes with the data line (Park, Fig. 10 element SL);

comparing signal levels generated in the electrodes to a predetermined level to output an amount of change in the signal levels (Park, Fig. 10 element 100); and

adding the amount of change in the signal levels to the selection level (Park, Fig. 10 element 100).

Regarding independent **Claim 6**, Park teaches a circuit for driving an electro-optical device (Park, Fig. 10) including:

a plurality of scanning lines (Park, Fig. 10 element SL);

a scanning line driving circuit that supplies to each of the scanning lines a scanning signal which is set to be at a selection level and a non-selection level corresponding to a selection period and a non-selection period of each scanning line (Park, Figs. 9 and 10);

a plurality of data lines which are wired to cross the scanning lines (Park, Fig. 10 element DL);

a data line driving circuit that supplies to each of the data lines a data signal whose pulse width is modulated on the basis of display data, and pixels provided in portions where the scanning lines cross the data lines and driven on the basis of the scanning signals and the data signals (Park, Fig. 10 element DL, Pg. 3 paragraph [0053]),

the circuit comprising electrodes which are wired to cross the data lines and are capacitively coupled with the data lines (Park, Fig. 10);

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the circuit comparing signal levels generated in the electrodes to a predetermined level to output an amount of change in the signal levels (Park, Fig. 10 element 100); an

the circuit adding the amount of change in the signal levels output from the comparison circuit to the selection level (Park, Fig. 10 element 100).

Regarding **Claim 7**, Park further teaches an electronic apparatus comprising the electro-optical device of Claim 1 (Park, Pg. 1 paragraph [0001-0002]).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ke Xiao whose telephone number is (571) 272-7776. The examiner can normally be reached on Monday through Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 10<sup>th</sup>, 2006 - kx -



**KENT CHANG**  
**PRIMARY EXAMINER**